

MAKING AGRICULTURAL KNOWLEDGE WORK FOR ALL



Not all farmers access knowledge equally. Women, youth, and older farmers face distinct barriers that shape how they learn and apply advice. Unless communication strategies account for these differences, agricultural knowledge risks reinforcing inequality instead of reducing it. Ranjitha Puskur and Devika Baraya discuss these challenges and potential solutions to address them [here](#).



CONTEXT

Farming is one of the most knowledge-dependent livelihoods. Farmers must constantly decide which crop or variety to plant, when to sow, how to manage pests, and when to sell in markets. Application of reliable knowledge can be the difference between a good harvest and crop failure. Without reliable knowledge, farmers are forced to rely on trial and error or copy neighbours, which can delay innovation and deepen vulnerability to shocks. Good information can mean the difference between food security and hunger, especially in this very dynamic world.

Historically, agricultural knowledge has been delivered through “top-down” extension approaches, where scientists or extension officers develop recommendations and pass them on to farmers. Common methods include:

- *Demonstrations and field days* – showing new varieties or management techniques.
- *Extension visits* – officers visiting farms or holding training sessions.
- *Mass media* – radio, TV, community announcements, broadcasting advisories.
- *Printed materials* – brochures, pamphlets, posters with technical information.

With the advent of smartphones, we are seeing the increasing use of digital technologies to disseminate information.

These approaches have helped disseminate information and knowledge on the use of new agricultural technologies, but they often assume all farmers are literate (also digitally), have time to attend trainings, or can travel to demonstration sites. They rarely tailor content to gender, age, or education levels.

WHY WOMEN MISS OUT

Women make up a large and growing share of India’s farmers—in some regions, more than half the agricultural workforce. Yet they face systemic barriers to information and knowledge:

- *Lower [literacy rates](#)*: Women are less likely to read pamphlets or technical guides.
- *Less access to [phones or digital tools](#)*: In many households, men control mobile ownership, limiting women’s access to apps, WhatsApp groups, or market price updates.
- *[Mobility constraints](#)*: Social norms and household responsibilities limit women’s ability to attend trainings, meetings, or field days.
- *Underrepresentation in [extension](#)*: In many countries, most extension officers are men, and their outreach often targets male farmers, sidelining women.
- *[Invisible roles](#)*: Women’s contributions (e.g., seed selection, transplanting, weeding) are undervalued, leading to a failure in information materials to address their specific needs.

As knowledge intermediaries or extension and advisory service personnel, we rarely make an effort to understand how diverse groups of farmers choose to receive information and what makes it accessible to them and motivates them to use it. The result is a knowledge gap that reinforces gender inequality: women do more farm labour but with less access to the information that would make their work more productive and less burdensome.

WHAT WE DID

As a part of the CGIAR Seed Equal Initiative, IRRI, together with Centre for Sustainable Agriculture (CSA) and Dvara E-Registry, set out to explore how farmers of different genders, ages, and literacy levels prefer to learn, especially regarding new varieties, seed production and management, and other climate-resilient farming practices.



Focus group discussion with older men who cannot read and write at MahbubNagar, Telangana

We interacted with farmers in three districts —Mahbubnagar in Telangana, and Ganjam and Balangir in Odisha—to discover what really works when it comes to the use of agricultural information, education, and communication (IEC) materials. We conducted systematic usability testing of a diverse range of printed and audio-visual IEC materials focused on increasing varietal awareness and quality seed production and use. We engaged with over 100 farmers in 18 focus groups, segmented by age, gender, and literacy.

WHAT WE LEARNT

The findings reinforced how gender, age, and education deeply shape how farmers prefer to receive agricultural knowledge.

Why Gender and Age Matter

Farmers face a plethora of challenges. But whether in Telangana or Odisha, they all want one thing—reliable, practical information they can trust.

Yet, the barriers are not the same for everyone. Women farmers often contend with lower literacy levels, limited mobility, and less access to mobile phones, which restricts their ability to benefit from written or digital materials. Older farmers, meanwhile, may struggle with digital platforms but rely on their deep farming experience and peer networks. Younger farmers, especially young men, are more tech-savvy and eager to explore online tools—but many are leaving agriculture in search of jobs elsewhere.

Unless communication strategies recognise these differences, agricultural knowledge risks reinforcing, rather than reducing, inequality.

Different farmers, Different needs

Our conversations revealed striking insights:

- Older farmers in Mahbubnagar said pamphlets with large, clear visuals help them grasp new methods.
- Non-literate men in Ganjam said videos and group meetings were far more useful than written guides.

- Younger farmers wanted digital guides and videos they could access on their phones—particularly on topics like soil health and market pricing.
- Women farmers emphasised local language materials and small group learning, often within self-help groups, where they feel more confident asking questions and sharing experiences.
- In Telangana, literate women farmers asked for step-by-step guides on seed management and crop cultivation, showing that when detailed, practical knowledge is available, farmers are eager to apply it.
- In Ganjam, older women farmers explained that pamphlets in formal Odia were challenging to understand. They preferred community discussions or explanatory training sessions to make sense of written materials. Many older women in Balangir said they struggled with written leaflets. They wanted visuals with clear images of seeds and practices. Some even confused wheat and paddy pictures in existing pamphlets—showing how poor design can exclude them. In Telangana, older women said they often relied on children or husbands to play videos for them on family phones. Younger women, though literate, still had to share devices, limiting how often they could access apps or WhatsApp groups.
- Young women farmers highlighted the value of short, shareable videos that could be watched on shared household phones, reflecting both their interest and the gendered barriers to phone ownership.

The standard message was clear: learning styles are shaped by both age and gender, and materials must reflect that diversity.

Seeing is believing

Across the study sites, videos emerged as the most popular medium. Farmers said they are more motivated when they see people like themselves on screen.

Women told they valued seeing women farmers featured in videos, as it made them feel the content was truly meant for them. “If I see another woman farmer succeed, it makes me want to try it too,” said one woman farmer in Ganjam.



Focus group discussion with older literate women at Ganjam, Odisha

A younger farmer in Balangir added that the most useful videos combine scientific insights with farmer stories: “We want to know the ‘why’ behind a technique, but we also want to see someone like us making it work.”

Representation matters. Women are inspired by women, youth by youth, and elders by trusted peers. This aligns with global evidence showing that peer-to-peer learning accelerates adoption and builds confidence.

However, there are no silver bullets. There is a need for a combination of approaches to make it stick. Older non-literate farmers in Telangana said they would not act on a pamphlet alone—they needed trusted demonstrations to feel confident adopting new varieties.

Trust Is the Real Currency

Knowledge doesn’t flow in a vacuum—it flows through relationships.

- Women farmers often trust other women, such as neighbours, self-help group leaders, or local female extension agents.
- Men and youth may turn to peers or digital sources for advice.
- Older farmers lean on community leaders or local input dealers.

This diversity in trust networks shows why agricultural communication must not only focus on the message, but also on the messenger. Closing the digital literacy gap is equally important—without it, older farmers and many women risk being left behind in a world where information is increasingly digital-first.

Keep It Simple, Keep It Local

Technical jargon is a barrier for everyone, but especially for women with limited schooling and older farmers who are less familiar with formal scientific language. Farmers repeatedly told us: “Keep it simple.”

That means:

- Use everyday language instead of technical terms.
- Translate into local dialects to ensure inclusivity.
- Provide visuals and storytelling rather than text-heavy guides.

When information is relatable and local, it becomes actionable.

TOWARDS INCLUSIVE COMMUNICATION

So, what does farmer-centred communication look like when gender and age are at the heart of it?

1. *Make relatable videos* – Show women, men, and youth farmers in action, blending science with lived experiences.
2. *Ditch the jargon* – Prioritise clarity, visuals, and local languages.
3. *Boost digital literacy* – Train older farmers and women to use digital tools like WhatsApp and YouTube.
4. *Leverage trust networks* – Work with self-help groups, youth collectives, and peer leaders.
5. *Design for inclusivity* – Ensure women and older farmers are not only recipients but also creators and messengers of agricultural knowledge.
6. *Test the messages and materials* – Engaging diverse user groups while crafting messages and designing IEC materials and testing them before wider dissemination will help in making them relevant and effective, and avoid wastage of scarce development resources.

The farmers of Telangana and Odisha gave us a clear blueprint: listen to women, hear the voices of youth, respect the wisdom of elders, and speak everyone's language.

IMPLICATIONS FOR EXTENSION

To be able to develop location-specific and effective communication materials, the following steps are critical:

- Engage farmers, ensuring they represent the diversity in the communities, to understand what information they need, in what form and through what channel they'd prefer receiving it.
- Do not assume that one size fits all. Material developed at the state or regional levels might not be relevant for everyone.
 - Develop messaging and materials and conduct usability testing.
 - Refine your materials based on that and then disseminate.
 - Set up feedback mechanisms to monitor the use of these materials by the farmers – how many can use what they are accessing.
- All these actions can be taken without any major cost implications. Simple, well-facilitated FGDs with groups segregated by gender, age, literacy, and other intersectional factors that might be relevant to the local context will be cost-effective for this purpose.
- There might be a need to train or re-train extension staff to do this and develop such materials. At the district level, the scheme, Agricultural Technology Management Agency ([ATMA](#)), [provides a budget](#) to develop locally relevant materials – this could be used very creatively.

END NOTE

Equipping farmers isn't just about giving them data or tools—it's about ensuring the information fits their realities, builds their confidence, and strengthens their communities. When farmers are met "where they are"—in their language, through their networks, and in formats that match their realities—knowledge becomes transformative.

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